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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,226	06/17/2005	Richard R. Roesler	PO7631US/MD02-174A	2747
157 7590 12/04/2007 BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205			EXAMINER PENG, KUO LIANG	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 12/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/539,226

Applicant(s)

ROESLER ET AL.

Examiner

Kuo-Liang Peng

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/17/05 IDS.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☒ Claim(s) 1-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/17/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)).

Claim Objections

2. Claims 1-25 are objected to because of the following informalities:

In Claim 1 (line 11), should "tformula" be -- formula --?

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to

which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 13-16 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmalstieg (US 5 756 751) in view of Higuchi (US 5 068 304).

Schmalstieg discloses a **moisture-curable polyether urethane** having at least two terminal **cyclic urea/reactive silane groups** (col. 2, line 48 to col. 3, line 11), which is prepared by a process described in col. 3, line 14 to col. 4, line 10 and Examples 36-38. The polyether polyols can be the ones having a molecular weight described in col. 6, lines 40 to col. 7, line 10. Since the structure of the terminal cyclic urea/reactive silane groups reads on Applicants' terminal cyclic urea/reactive silane groups, the alkyl group on the ester group and the alkyl groups on alpha- and beta- carbons (relative to the carbon of the carbonyl moiety of the ester group) on both structures should be inert to isocyanates groups at a temperature of 100°C or less. The **moisture-curable polyether urethane** having terminal cyclic urea/reactive silane groups can be used in a sealant, adhesive or coating composition (col. 8, lines 4-16 and Example 39). Schmalstieg is silent the use of a moisture-curable polyether urethane with polyether segments having a degree of unsaturation of **less than 0.04 meq/g**. However, Higuchi teaches the use

of a polyether having a degree of unsaturation of not higher than 0.07 meq/g, for example, **0.02 meq/g** in a moisture-curable polyether urethane. The motivation is to avoid a deterioration of the physical properties due to an unsaturated monool as a by-product. (col. 1, lines 4-9, col. 2, line 49 to col. 3, line 19 and col. 9, line 64 to col. 10, line 18) In light of the benefit mentioned, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize Higuchi's polyether with low degree of unsaturation for preparing Schmalstieg's moisture-curable polyether urethane with expected success. Especially, Higuchi is in the same field as that of Schmalstieg's endeavor.

5. Claims 5-12 and 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmalstieg in view of Higuchi as applied to Claims 1-4, 13-16 and 25 above, and further in view of Roesler (US 2003/0225237).

The difference between Schmalstieg in view of Higuchi and the present invention is the requirement of the claimed polyether urethane b).

Schmalstieg further teaches the desire to obtain a sealant comprising a polyether urethane with good elongation. (col. 1, lines 7-9 and col. 2, lines 22-37) Furthermore, Roesler teaches the use of a polyether urethane containing one reactive silane group and one or more polyether segments having a specific

number average molecular weight and a specific amount in a sealant comprising a polyether urethane. ([0014]-[0023], [0044] and [0052]) The motivation is to afford a sealant with high elongation, etc. ([0007]) In light of which, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Roesler's polyether urethane containing one reactive silane group and one or more polyether segments having a specific number average molecular weight and a specific amount into Schmalstieg's composition with expected success.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck, can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Klp
December 3, 2007



Kuo-Liang Peng
Primary Examiner
Art Unit 1796